



XP-SP910

XP-SP911

AUB

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SERVICE MANUAL

COMPACT DISC PLAYER

BASIC CD MECHANISM : DA23L

This Service Manual is the "Revision Publishing" and replaces "Simple Manual" (S/M Code No. 09-003-341-6T1).

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S/M Code No. 09-003-341-6R1

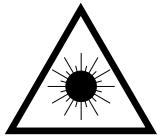
REVISION
DATA

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylit-täälle näkymättömälle lasersäteilylle.

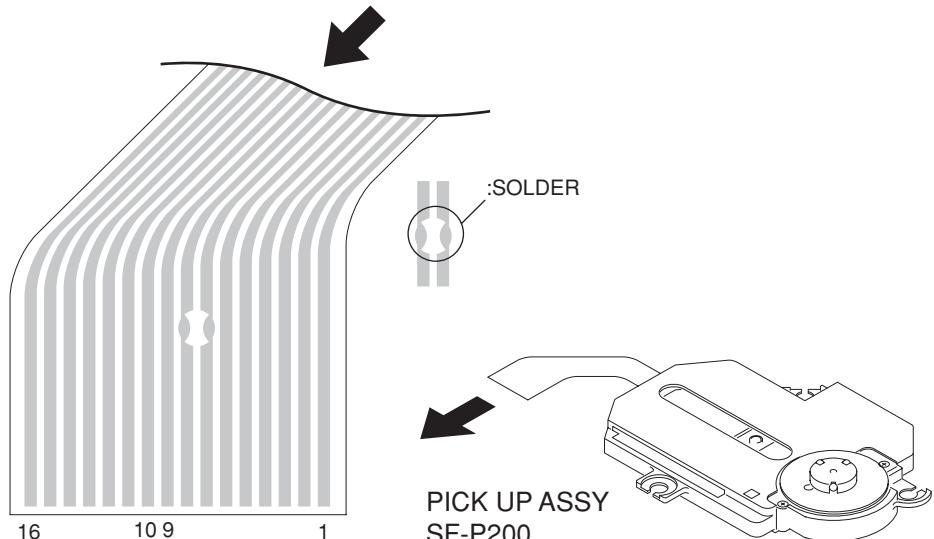
VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

Precaution to replace Optical block (SF-P200)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.



SPECIFICATIONS

Tracking system	3-beam laser
Laser pickup	Semiconductor laser
D/A conversion	4-times oversampling digital filter + 1-bit DAC
Frequency response	20 – 20,000 Hz
Output	PHONES/LINE OUT jack (stereo mini-jack)
Maximum output	12 mW + 12 mW (EIAJ 16 ohms at 1 kHz) 500 mV (47 k ohms at 1 kHz)
Power supply	DC 3 V using two size AA (LR6) alkaline batteries DC 2.4 V using commercially available rechargeable batteries AC house current using the supplied AC adaptor
Maximum outside dimensions	132 (W) × 30 (H) × 141 (D) mm (excluding projecting parts and controls) (5 1/4 × 1 3/16 × 5 5/8 in.)
Weight	Approx. 270 g (9.5 oz.) excluding batteries
AC adaptor AC-D603	Rated voltage: AC 120 V, 60 Hz

- Design and specifications are subject to change without notice.

ACCESSORIES LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
▲	8A-HC3-911-010	IB,U(ESF)C2	
	87-B30-282-010	AC ADAPTOR,AC-D603UNC	
	87-B30-225-010	HEADPHONE,HP-M034	
	8A-HC3-951-010	CASE,CARRING (SP911)<1UB2,1U32>	

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C315	87-012-274-080	CHIP CAP,U 1000P-50B	
	87-A21-448-040	C-IC,BH6554FV		C316	87-010-831-080	C-CAP,U,0.1-16F	
	8A-HC3-610-010	C-IC,MN101C439-AC		C317	87-012-274-080	CHIP CAP,U 1000P-50B	
	87-A21-030-040	C-IC,S-93C46AMFN		C318	87-012-274-080	CHIP CAP,U 1000P-50B	
	87-A21-446-010	C-IC,MN62782RPT1		C319	87-012-188-080	C-CAP,U 47P-50 CH	
	87-A21-561-040	C-IC,MSM51V17400D-SJ		C401	87-016-431-080	C-CAP,E 220-4 5.5N	
	87-A21-578-040	C-IC,AN8838NSB		C403	87-016-429-080	C-CAP,E 100-4 5.5N	
	87-A21-543-040	C-IC,NJU7012		C405	87-010-831-080	C-CAP,U,0.1-16F	
	87-A21-521-040	C-IC,BH6517FS		C406	87-012-273-080	C-CAP,U 820P-50 B	
	87-A21-085-040	C-IC,TA2120FN		C407	87-010-787-080	CAP, U 0.022-25	
TRANSISTOR				C408	87-A10-260-080	C-CAP,U 0.1-16 K B	
	87-026-412-080	C-TR,RN1305		C409	87-A10-827-080	C-CAP,U 0.47-6.3 K B	
	87-A30-075-080	C-TR,2SA1235F		C410	87-012-286-080	CAP, U 0.01-25	
	89-211-323-080	C-TR,2SB1132R		C411	87-A11-062-080	C-CAP,S 2.2-16 Z F	
	89-416-643-080	C-TR,2SD1664R		C412	87-016-429-080	C-CAP,E 100-4 5.5N	
	87-A30-076-080	C-TR,2SC3052F		C413	87-010-831-080	C-CAP,U,0.1-16F	
	89-113-695-680	C-TR,2SA1369G/H		C415	87-A10-047-080	C-CAP,U 1-10 Z F	
	87-A30-332-040	C-TR,CPH3106		C416	87-010-831-080	C-CAP,U,0.1-16F	
	87-A30-278-040	C-FET,2SK2980		C417	87-012-188-080	C-CAP,U 47P-50 CH	
	89-115-865-080	C-TR,2SA1586GR		C418	87-012-164-080	C-CAP,U 2P-50 CK	
	87-A30-336-040	C-TR,UMH4N		C419	87-012-164-080	C-CAP,U 2P-50 CK	
	87-026-429-080	TR,RN2311		C420	87-010-831-080	C-CAP,U,0.1-16F	
	87-026-418-080	TR,RN1311 (0.1W)		C421	87-010-831-080	C-CAP,U,0.1-16F	
	87-A30-377-040	C-TR,2SB815B7		C422	87-010-831-080	C-CAP,U,0.1-16F	
DIODE				C423	87-A10-047-080	C-CAP,U 1-10 Z F	
	87-A40-614-040	C-DIODE,SFPB-72		C424	87-A10-047-080	C-CAP,U 1-10 Z F	
	87-A40-469-080	C-DIODE,HSM2838CTR		C451	87-A10-047-080	C-CAP,U 1-10 Z F	
	87-A40-836-040	C-ZENER,HZM6.2NB1		C501	87-016-429-080	C-CAP,E 100-4 5.5N	
	87-A40-592-040	C-ZENER,HZM11NB2		C502	87-010-831-080	C-CAP,U,0.1-16F	
	87-A40-674-080	C-DIODE,HRC0202A		C504	87-010-831-080	C-CAP,U,0.1-16F	
	87-001-166-080	DIODE,1SS301		C510	87-A11-241-080	C-CAP,TN 22-6.3 M F93 A	
MAIN C.B				C512	87-A11-241-080	C-CAP,TN 22-6.3 M F93 A	
C101	87-012-286-080	CAP, U 0.01-25		C514	87-A11-228-080	C-CAP,U 0.027-25 K B	
C102	87-A11-031-080	C-CAP,E 100-16 M WX		C515	87-A11-228-080	C-CAP,U 0.027-25 K B	
C103	87-012-286-080	CAP, U 0.01-25		C516	87-A10-260-080	C-CAP,U 0.1-16 K B	
C104	87-A11-031-080	C-CAP,E 100-16 M WX		C518	87-012-176-080	C-CAP,U 15P-50 CH	
C105	87-010-831-080	C-CAP,U,0.1-16F		C520	87-016-426-080	C-CAP,E 47-4 5.5N	
C201	87-012-286-080	CAP, U 0.01-25		C521	87-012-274-080	CHIP CAP,U 1000P-50B	
C202	87-016-427-080	C-CAP,E 47-6.3 5.5N		C522	87-A10-047-080	C-CAP,U 1-10 Z F	
C203	87-012-286-080	CAP, U 0.01-25		C523	87-A10-047-080	C-CAP,U 1-10 Z F	
C204	87-016-430-080	C-CAP,E 100-6.3 5.5N		C524	87-012-172-080	C-CAP,U 10P-50 CH	
C205	87-016-421-080	C-CAP,E 10-16 5.5N		C601	87-016-429-080	C-CAP,E 100-4 5.5N	
C206	87-A10-047-080	C-CAP,U 1-10 Z F		C602	87-012-286-080	CAP, U 0.01-25	
C207	83-HC3-635-080	C-CAP,E 220-6.3 WF		C603	87-012-286-080	CAP, U 0.01-25	
C208	87-016-422-080	C-CAP,E 22-6.3		C604	87-012-286-080	CAP, U 0.01-25	
C209	87-A10-260-080	C-CAP,U 0.1-16 K B		C701	87-016-429-080	C-CAP,E 100-4 5.5N	
C210	87-A10-047-080	C-CAP,U 1-10 Z F		C702	87-012-281-080	C-CAP,U 3900P-50 B	
C211	87-010-787-080	CAP, U 0.022-25		C703	87-012-281-080	C-CAP,U 3900P-50 B	
C212	87-012-266-080	C-CAP,U 220P-50 B		C704	87-012-273-080	C-CAP,U 820P-50 B	
C213	87-A11-062-080	C-CAP,S 2.2-16 Z F		C705	87-012-273-080	C-CAP,U 820P-50 B	
C214	87-010-831-080	C-CAP,U,0.1-16F		C706	87-010-831-080	C-CAP,U,0.1-16F	
C301	87-016-426-080	C-CAP,E 47-4 5.5N		C707	87-A11-062-080	C-CAP,S 2.2-16 Z F	
C302	87-012-286-080	CAP, U 0.01-25		C708	87-A11-062-080	C-CAP,S 2.2-16 Z F	
C303	87-012-273-080	C-CAP,U 820P-50 B		C709	87-A10-047-080	C-CAP,U 1-10 Z F	
C304	87-010-831-080	C-CAP,U,0.1-16F		C710	87-016-421-080	C-CAP,E 10-16 5.5N	
C305	87-012-286-080	CAP, U 0.01-25		C711	87-016-429-080	C-CAP,E 100-4 5.5N	
C306	87-012-274-080	CHIP CAP,U 1000P-50B		C712	87-A10-353-080	C-CAP,U,0.22-10KB	
C307	87-012-286-080	CAP, U 0.01-25		C713	87-A10-260-080	C-CAP,U 0.1-16 K B	
C309	87-016-429-080	C-CAP,E 100-4 5.5N		C714	87-A11-062-080	C-CAP,S 2.2-16 Z F	
C310	87-012-286-080	CAP, U 0.01-25		C715	87-016-421-080	C-CAP,E 10-16 5.5N	
C311	87-A10-047-080	C-CAP,U 1-10 Z F		C716	87-010-831-080	C-CAP,U,0.1-16F	
C313	87-012-274-080	CHIP CAP,U 1000P-50B		C717	87-010-831-080	C-CAP,U,0.1-16F	
C314	87-012-274-080	CHIP CAP,U 1000P-50B		C718	87-016-431-080	C-CAP,E 220-4 5.5N	
				C719	87-016-431-080	C-CAP,E 220-4 5.5N	
				C720	87-012-274-080	CHIP CAP,U 1000P-50B	

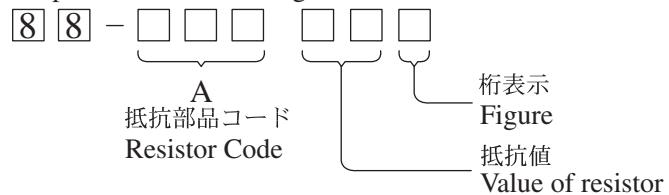
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C721	87-012-274-080	CHIP CAP,U 1000P-50B	
C722	87-010-831-080	C-CAP,U,0.1-16F	
C723	87-A10-047-080	C-CAP,U 1-10 Z F	
CN301	87-A61-241-080	C-CONN,26P H 52437-2691	
CN501	87-009-214-080	CONN,16P 52207-1690	
CN601	87-099-522-080	CONN,6P ZH-SM3 V W	
FB701	83-XM1-617-080	C-COIL,BK2125HM601	
FB704	83-XM1-617-080	C-COIL,BK2125HM601	
J101	87-A60-421-010	JACK,DC HEC3600 BLK 6	
J701	85-HC5-616-010	JACK,3.5 ST W/R GRN	
L201	87-A50-355-080	C-COIL,330UH LQH3C	
L202	87-A50-587-080	C-COIL,68UH-CDRH5D28	
L203	87-A50-355-080	C-COIL,330UH LQH3C	
L301	87-A50-367-080	C-COIL, 10UH LQG21F	
L302	87-A50-367-080	C-COIL, 10UH LQG21F	
L401	87-A50-556-080	C-COIL, 47UH K LQH3C	
L402	87-A50-440-080	C-COIL, 100UH K LQH3C34	
L501	87-A50-501-080	C-COIL,10UH-FSLB2520	
L502	87-A50-367-080	C-COIL, 10UH LQG21F	
S301	87-A90-494-080	C-SW,SL 1-1-3 SSSS81	

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
S302	87-A91-622-010	SW, MICRO	PV1102
X401	87-A70-261-080	C-VIB, CER	16.93MHZ CSTCW-MX03T
LID C.B			
CN801	87-A61-241-080	C-CONN,	26P H 52437-2691
LCD801	8A-HC3-605-010	LCD, AHC-3	
S801	87-A90-232-080	C-SW, TACT	SKQRRA
S802	87-A90-232-080	C-SW, TACT	SKQRRA
S803	87-A90-232-080	C-SW, TACT	SKQRRA
S804	87-A90-232-080	C-SW, TACT	SKQRRA
S805	87-A90-232-080	C-SW, TACT	SKQRRA
S806	87-A90-232-080	C-SW, TACT	SKQRRA
S807	87-A90-232-080	C-SW, TACT	SKQRRA
S808	87-A90-232-080	C-SW, TACT	SKQRRA
S809	87-A90-232-080	C-SW, TACT	SKQRRA

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

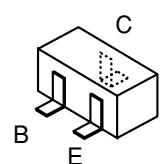
Chip Resistor Part Coding



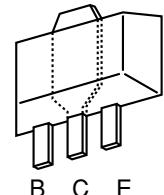
チップ抵抗 Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード Resistor Code : A	
				外形/Form	L	W		
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

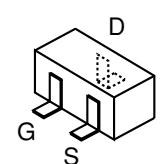
TRANSISTOR ILLUSTRATION



2SA1235
2SA1586
2SB815
2SC3052
CPH3106
RN1305
RN1311
RN2311
UMH4N



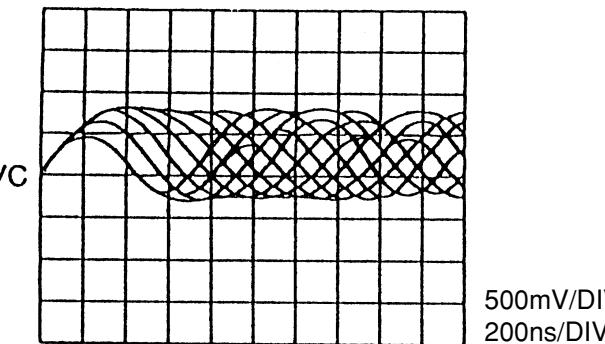
2SA1369
2SB1132
2SD1664



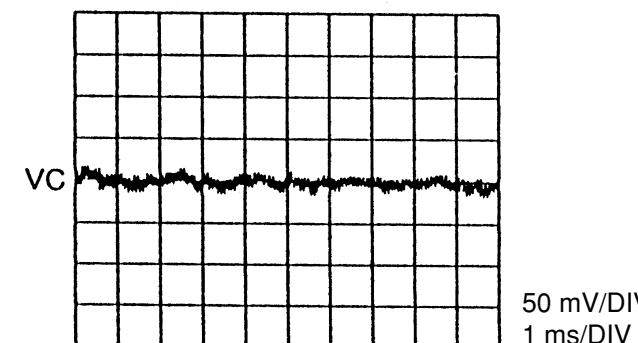
2SK2980

WAVEFORMS

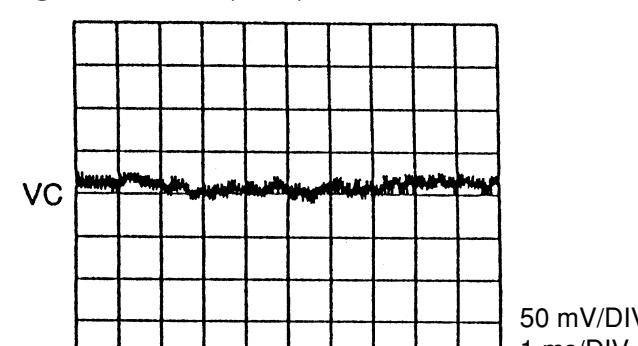
① IC501 Pin7 (RF O)



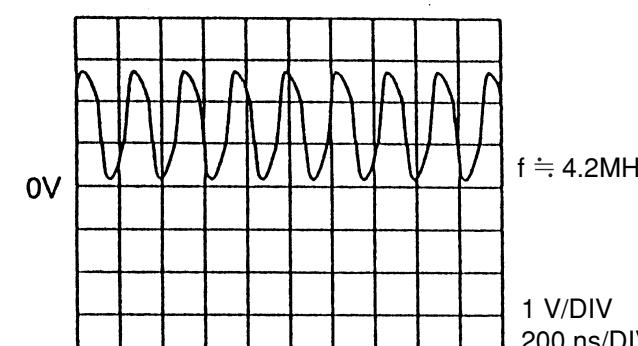
② IC502 Pin4 (TA O)



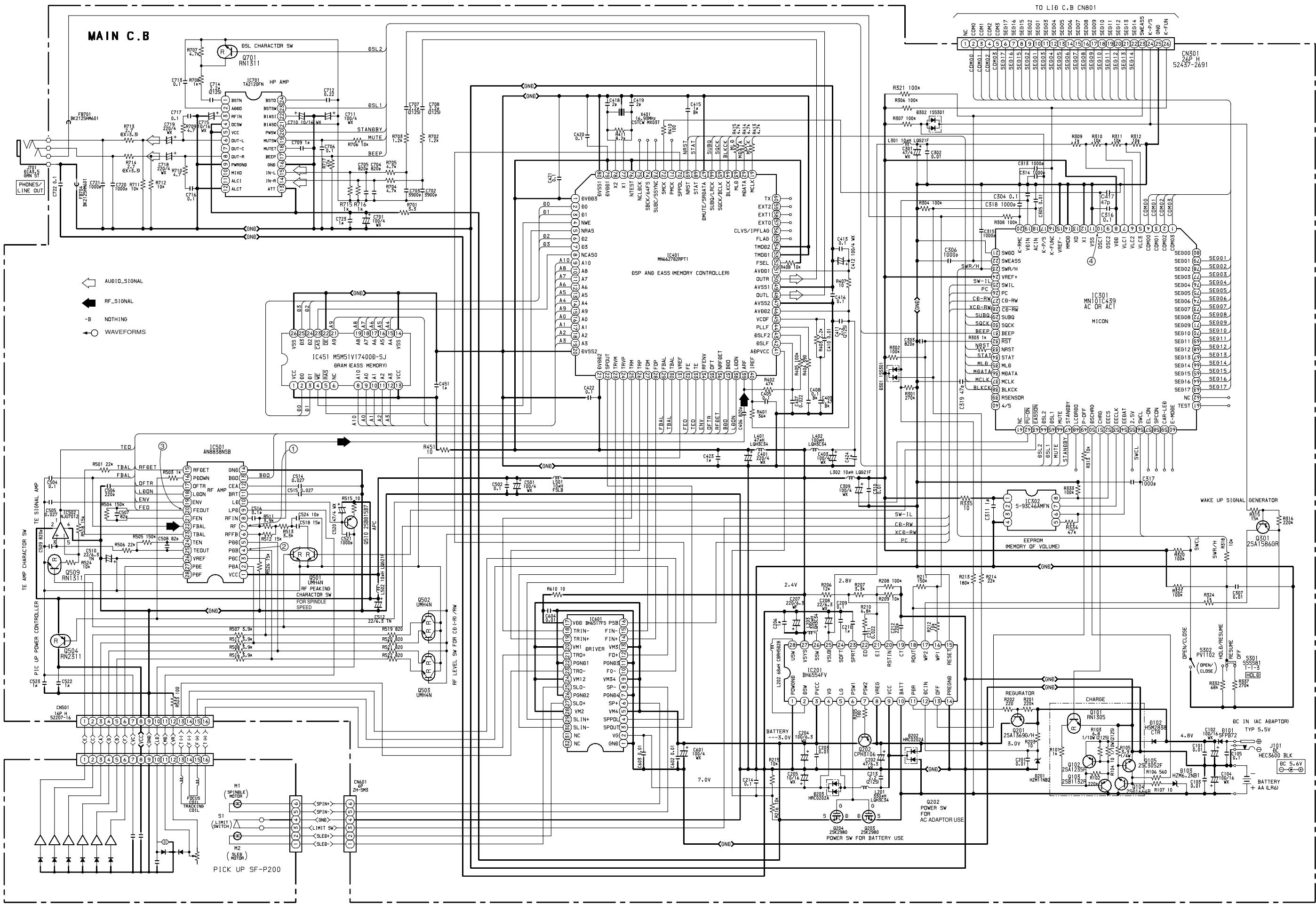
③ IC501 Pin20 (FE O)



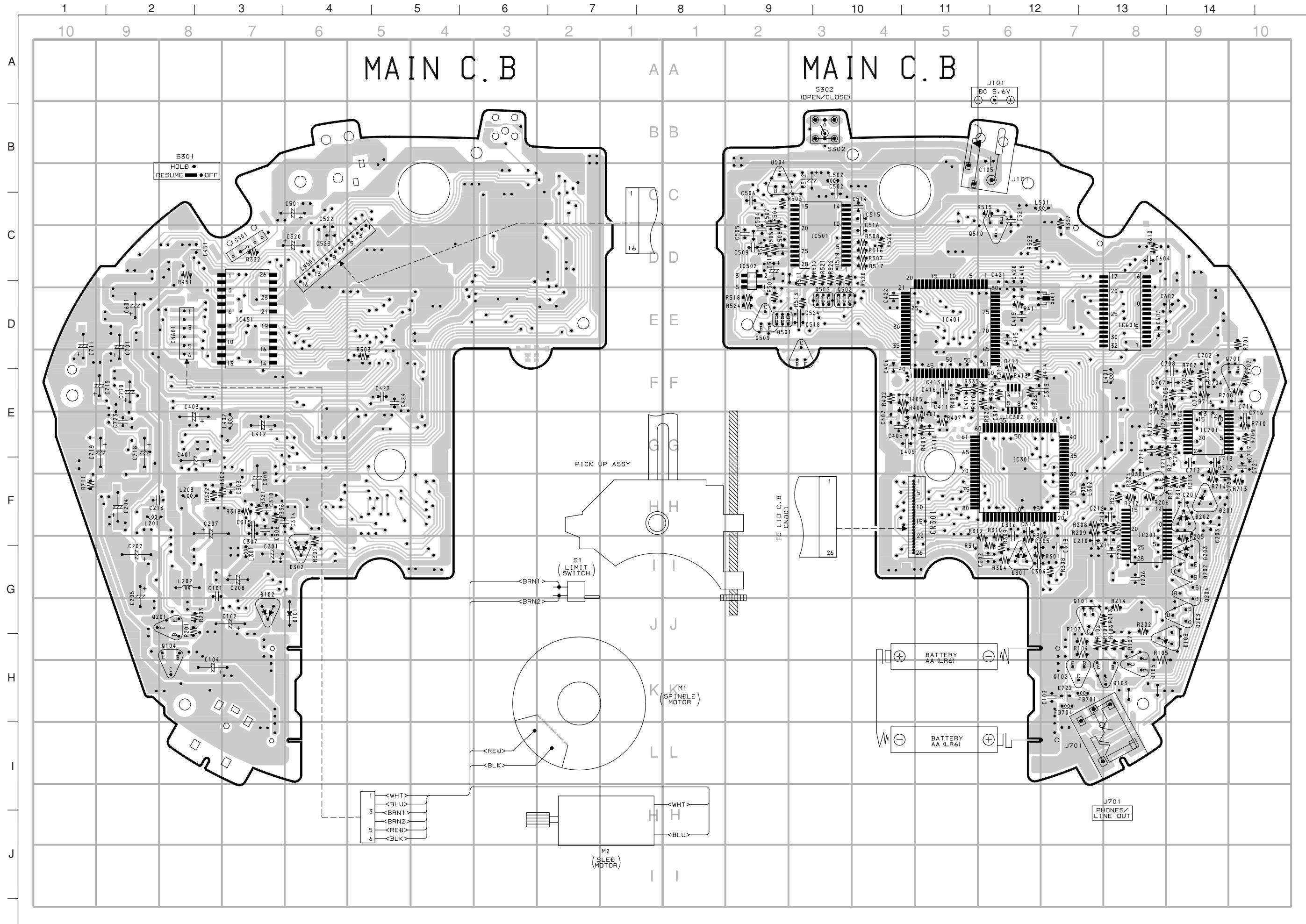
④ IC301 Pin10 (OSC I)



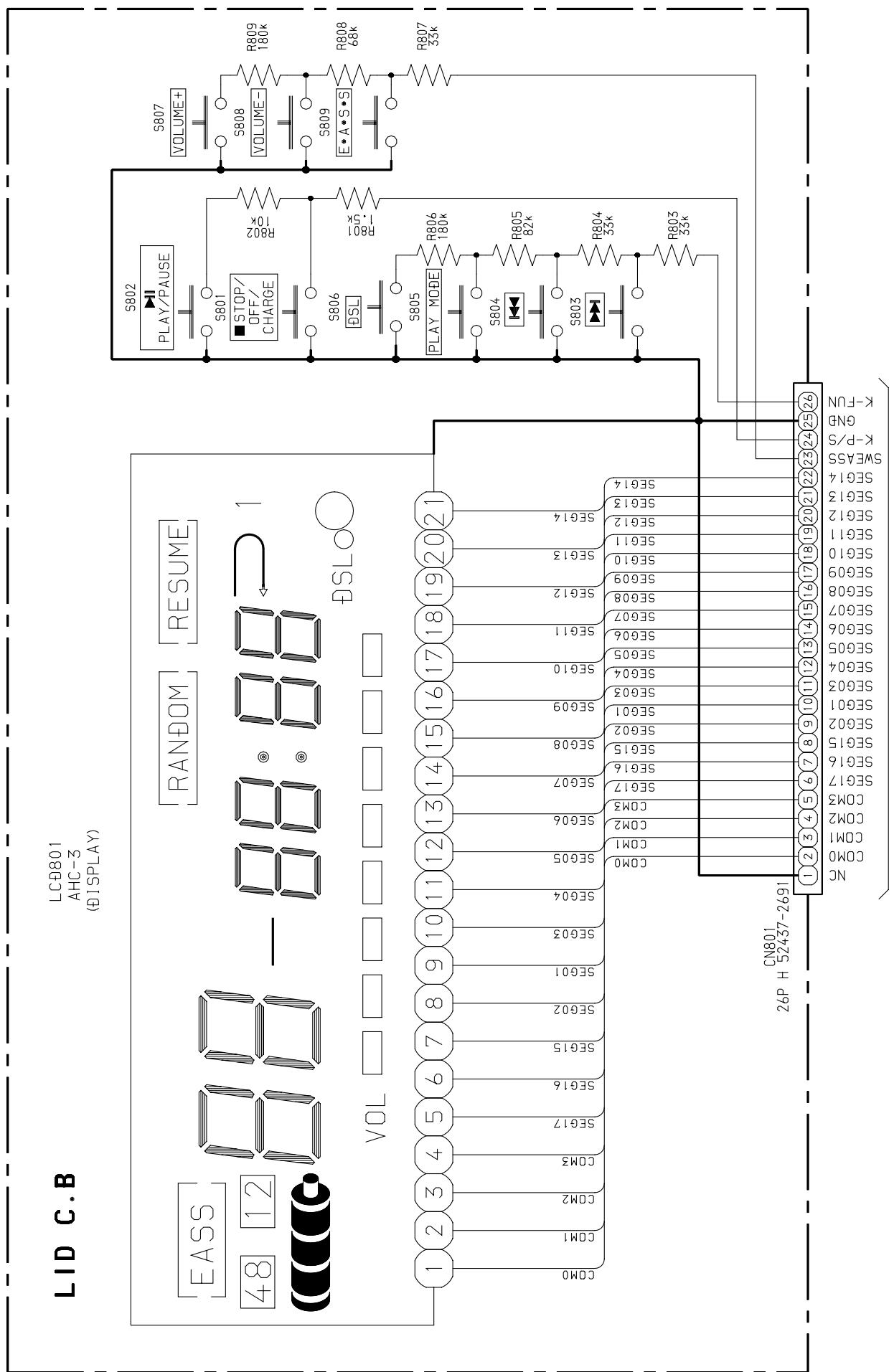
SCHEMATIC DIAGRAM-1 (MAIN SECTION)



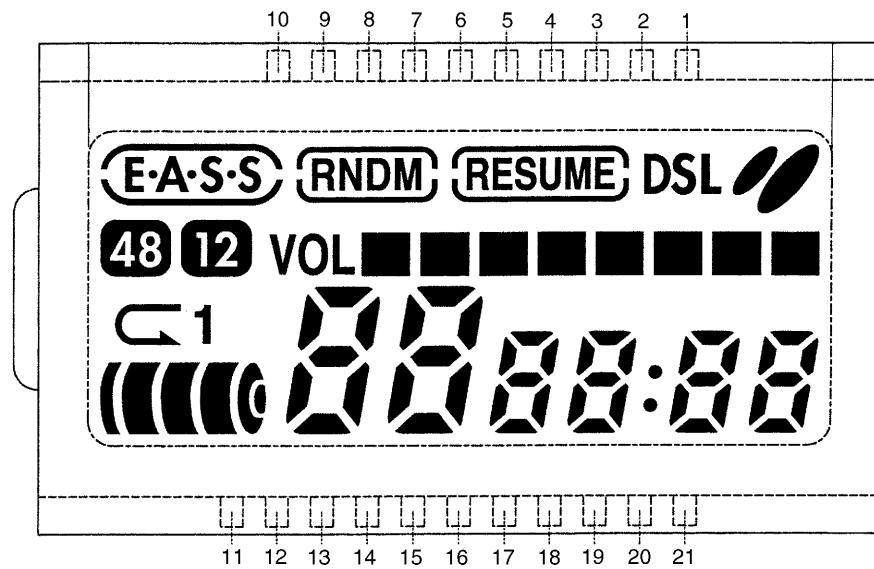
WIRING-1 (MAIN C.B)



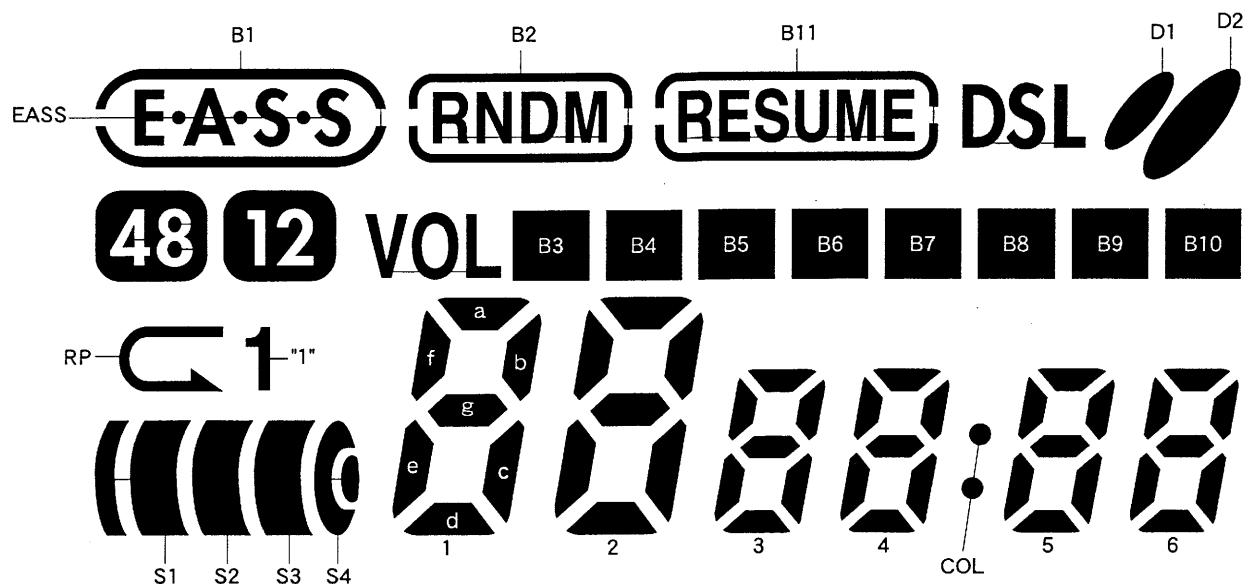
SCHEMATIC DIAGRAM-2 (LID SECTION)



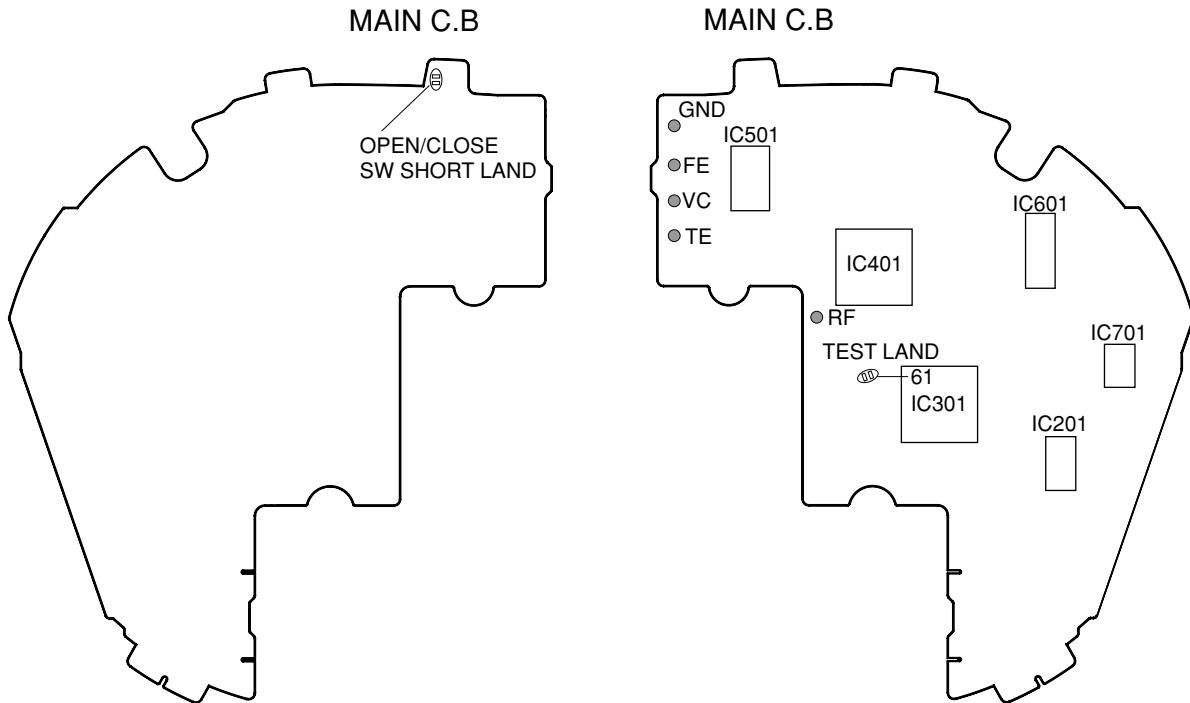
LCD DISPLAY



No	COM0	COM1	COM2	COM3
1	COM0	---	---	---
2	---	COM1	---	---
3	---	---	COM2	---
4	---	---	---	COM3
5	B8	B9	D1	D2
6	B6	B7	DSL	B11
7	"1"	12	B2	RNDM, RESUME
8	RP	48	B1	EASS
9	S1	S2	S3	S4
10	VOL	1f	1e	1d
11	1a	1b	1g	1c
12	B3	2f	2e	2d
13	2a	2b	2g	2c
14	B4	3f	3e	3d
15	3a	3b	3g	3c
16	B5	4f	4e	4d
17	4a	4b	4g	4c
18	COL	5f	5e	5d
19	5a	5b	5g	5c
20	B10	6f	6e	6d
21	6a	6b	6g	6c



TEST MODE



The servo circuit of this model is designed to be adjustment-free and the adjustment value and disc distinction (CDDA, CD-R and CD-RW) etc. is adjusted by within the IC. Therefore the adjustment is performed each TOC reading. The adjustment conditions within the IC of each servo can be monitored in this test mode.

1. How to start the Test Mode

Starting method of the test mode differ depending upon the type of disc being used. This is because the adjustment values of each servo also differ depending upon the type of disc.

When using the CD-DA or CD-R

- 1) Short-circuit TEST LAND and OPEN/CLOSE SW land.
- 2) Insert the AC plug to the power outlet and install the CD-DA or CD-R disc.
- 3) Press the PLAY and STOP buttons in this sequence and read the TOC.

When using the CD-RW

- 1) Short-circuit the TEST LAND and the OPEN/CLOSE SW land.
- 2) Insert the AC plug to the power outlet and install the CD-RW disc.
- 3) Press the PLAY, STOP and DSL buttons in this sequence and read the TOC. The LCD should display "CD-r" at this point.

Note 1) If the TOC cannot read, "ERR" has appeared on the LCD. The following step 2 and 3 can be verified even if the "TOC" cannot be read.

Note 2) By repeatedly pressing the DISPLAY/ENTER button the all LCD light up and the "TOC" display are repeated.

Note 3) By repeatedly pressing the DSL button the LCD "CD-r" and "CD-d" are repeated.
When the LCD displays "CD-d" ⇒ CD-DA, CD-R is selected.
When the LCD displays "CD-r" ⇒ CD-RW is selected.

Note 4) The test mode is canceled by disconnect the AC plug and remove the soldering of short land.

2. DISC distinction (confirmation of the FE waveform)

This mode is possible to perform a confirmation of the disc distinction.

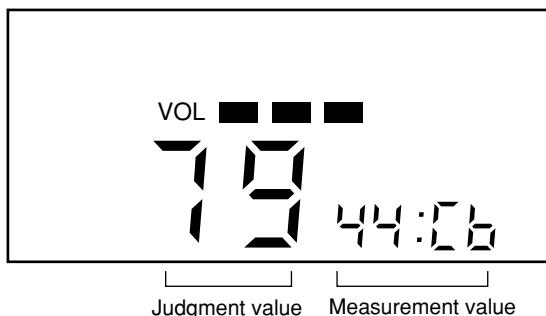
Confirmation method

- 1) Press the DSL button and select "CD-d" or "CD-r" (Refer to Note 3))
- 2) Install the disc.
- 3) Press the MODE button.

The LCD will change as follows:

Example:

Test disc: TCD-782, DISC type select: CD-d, Judgment value: 79, Measurement value: 44 CB



* All numerical value are displayed in HEX.

What disc the IC has selected can be understood according to this judgment value.

The decision standard of IC is as follows.

	LCD displays "CD-d"	LCD displays "CD-r"
0 < Judgment value < 10	No disc	No disc
10 < Judgment value < 32	CD-RW	No disc
32 < Judgment value < C8	CD-DA and CD-R	CD-RW
C8 < Judgment value		CD-DA and CD-R

The state of the FE waveform can also be understood from this judgment.

3. Confirmation of Sled movement

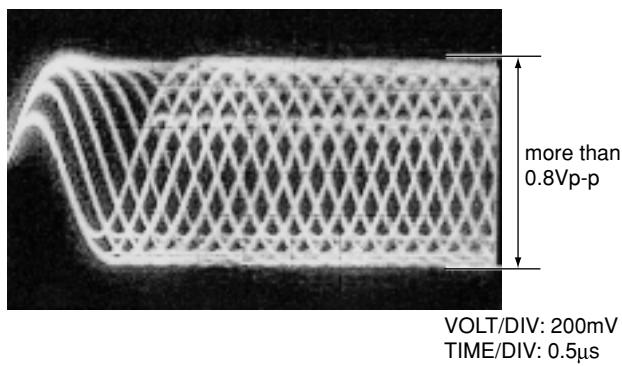
By pressing the F. SKIP of B. SKIP button continuously, it is possible to transfer the pick-up to either the outer side or inner side.

4. Confirmation of the RF level

Test point: RF and VC (Vref)

Test disc: TCD-782

Confirm that the RF waveform as shown below.



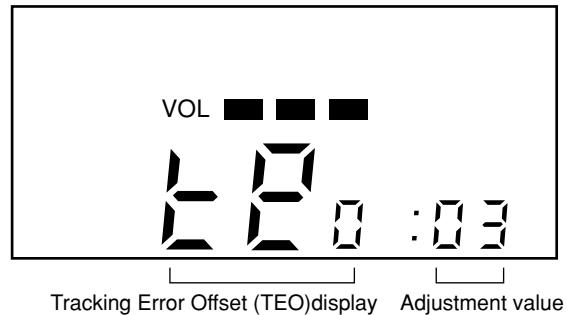
6. Confirmation of each servo

It is possible to confirm the adjustment value of each servo by repeatedly pressing the MODE button while the disc is playing, The switchover, sequence is as stated below.

Confirmation mode off \Rightarrow Focus Bias (FB) \Rightarrow Tracking Balance(TB) \Rightarrow Tracking Gain (TG) \Rightarrow Tracking Error Offset(TEO) \Rightarrow Focus Gain (FG) \Rightarrow Focus Error Offset (FEO)
Confirmation mode off

Example:

Tracking Error Offset (TEO) Adjustment value: 03



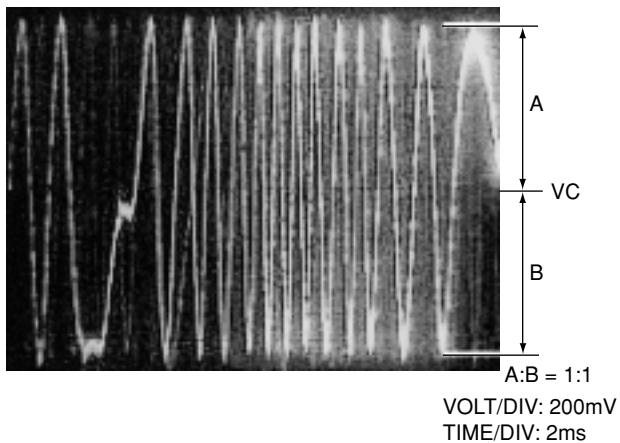
Adjustment value are displayed in HEX.

5. Confirmation of Tracking balance

Test point: TE and VC (Vref)

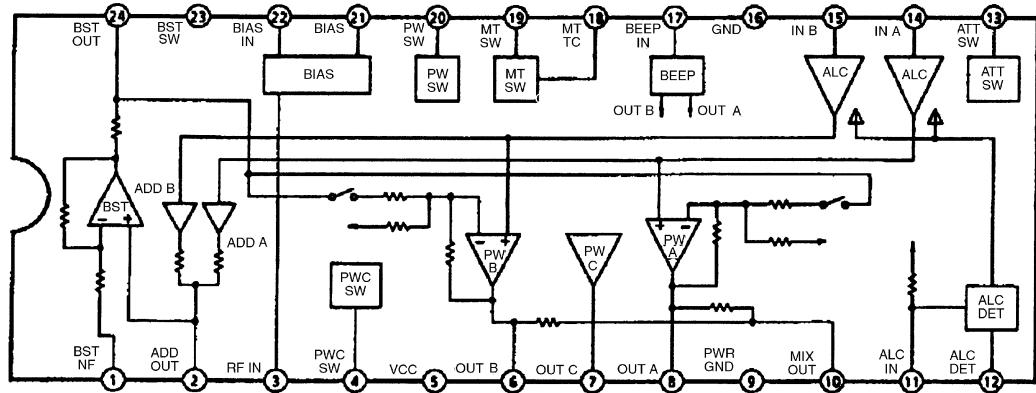
Test disc: TCD-782

Press the DSL button while the test disc playing and confirm the TE waveform is as is shown below.

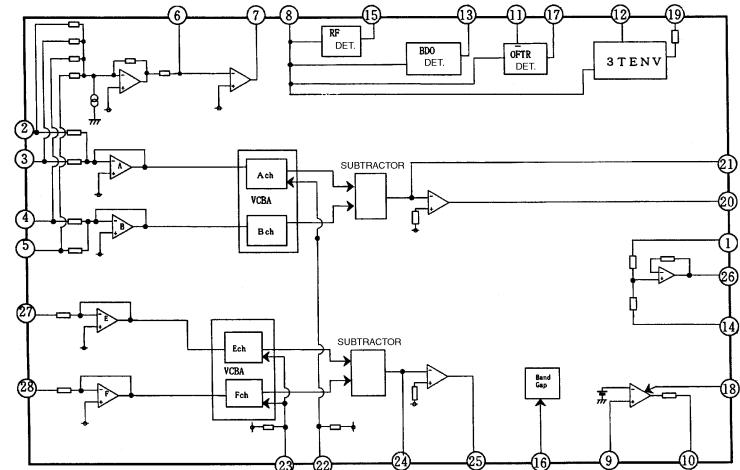


IC BLOCK DIAGRAM

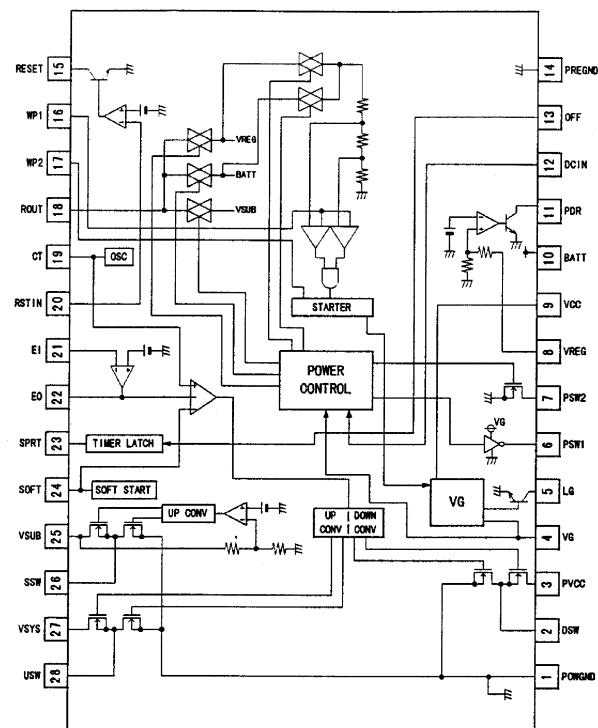
IC, TA2120FN



IC, AN8838NSB



IC, BH6554FV



IC DESCRIPTION

IC, MSM51V17400D

Pin No.	Pin Name	I/O	Description
1	VCC	—	+2.5V power supply
2	D0	I/O	Data input/output
3	D1		
4	<u>WE</u>	I	Write enable
5	<u>RAS</u>	I	Row address strobe
6	NC	—	Not connected
8	A10	I	Address inputs
9	A0		
10	A1		
11	A2		
12	A3		
13	VCC	—	+2.5V power supply
14	VSS	—	Ground
15	A4	I	Address inputs
16	A5		
17	A6		
18	A7		
19	A8		
21	A9	I	Address input
22	<u>OE</u>	O	Output enable
23	<u>CAS</u>	I	Column address strobe
24	D2	I/O	Data input/output
25	D3		
26	VSS	—	Ground

IC, S-93C46AMFN

Pin No.	Pin Name	I/O	Description
1	VCC	—	Power supply
2	NC	—	Not connected
3	TEST	—	Test terminal. Open (can be connected to Vcc or GND)
4	GND	—	Ground
5	DO	O	Serial data output
6	DI	I	Serial data input
7	SK	I	Serial clock input
8	CS	I	Chip select input

IC, MN662782RPT1

Pin No.	Pin Name	I/O	Description
1	DVDD3	—	Power supply of DRAM interface (pins 2-19)
2	D0	I/O	DRAM data input/output signal 0,
3	D1	I/O	DRAM data input/output signal 1
4	NWE	O	DRAM write enable signal
5	NRAS	O	DRAM RAS control signal
6	D2	I/O	DRAM data input/output signal 2
7	D3	I/O	DRAM data input/output signal 3
8	NCAS0	O	DRAM CAS control signal 0
9	A10	O	DRAM CAS control signal 1 (when two 1M/4M DRAMs are used) DRAM address signal 10 (when 16M DRAM is used)
10 ~ 14	A8 ~ A4	O	DRAM address signals 8 ~ 4
15	A9	O	DRAM address signal 9
16 ~ 19	A0 ~ A3	O	DRAM address signals 0 ~ 3
20	DVSS2	—	Ground of digital circuits
21	DVDD2	—	Power supply of digital circuits
22	SPOUT	O	Spindle motor drive signal output (absolute value output)
23	TRVM	O	Traverse drive output (positive polarity output)
24	TRVP	O	Traverse drive output (negative polarity output)
25	TRM	O	Tracking drive output (positive polarity output)
26	TRP	O	Tracking drive output (negative polarity output)
27	FOM	O	Focus drive output (positive polarity output)
28	FOP	O	Focus drive output (negative polarity output)
29	FBAL	O	Focus balance adjustment output
30	TBAL	O	Tracking balance adjustment output
31	VREF	—	Reference voltage of DA output circuits (FBAL, TBAL, DSLF2)
32	FE	I	Focus error signal input (analog input)
33	TE	I	Tracking error signal input (analog input)
34	RFENV	I	RF envelope signal input (analog input)
35	OFT	I	Off-track signal input. H: Off-track
36	NRFDET	I	RF detection signal input. L: Detection
37	BDO	I	Dropout signal input. H: Dropout
38	LDON	O	Laser ON signal output. H: ON
39	ARF	I	RF signal input
40	IREF	I	Reference current input
41	ADPVCC	I	AD reference voltage input (analog input)
42	DSL	O	Loop filter terminal for DSL
43	DSLF2	O	DSL unbalance current compensation
44	PLLF	O	Loop filter terminal for PLL
45	VCOF	O	Loop filter terminal for jitter-free VCO
46	AVDD2	—	Power supply of analog circuits (DSL, PLL, VCOF, AD, DA)
47	AVSS2	—	Ground of analog circuits (DSL, PLL, VCOF, AD, DA)
48	OUTL	O	Lch audio output

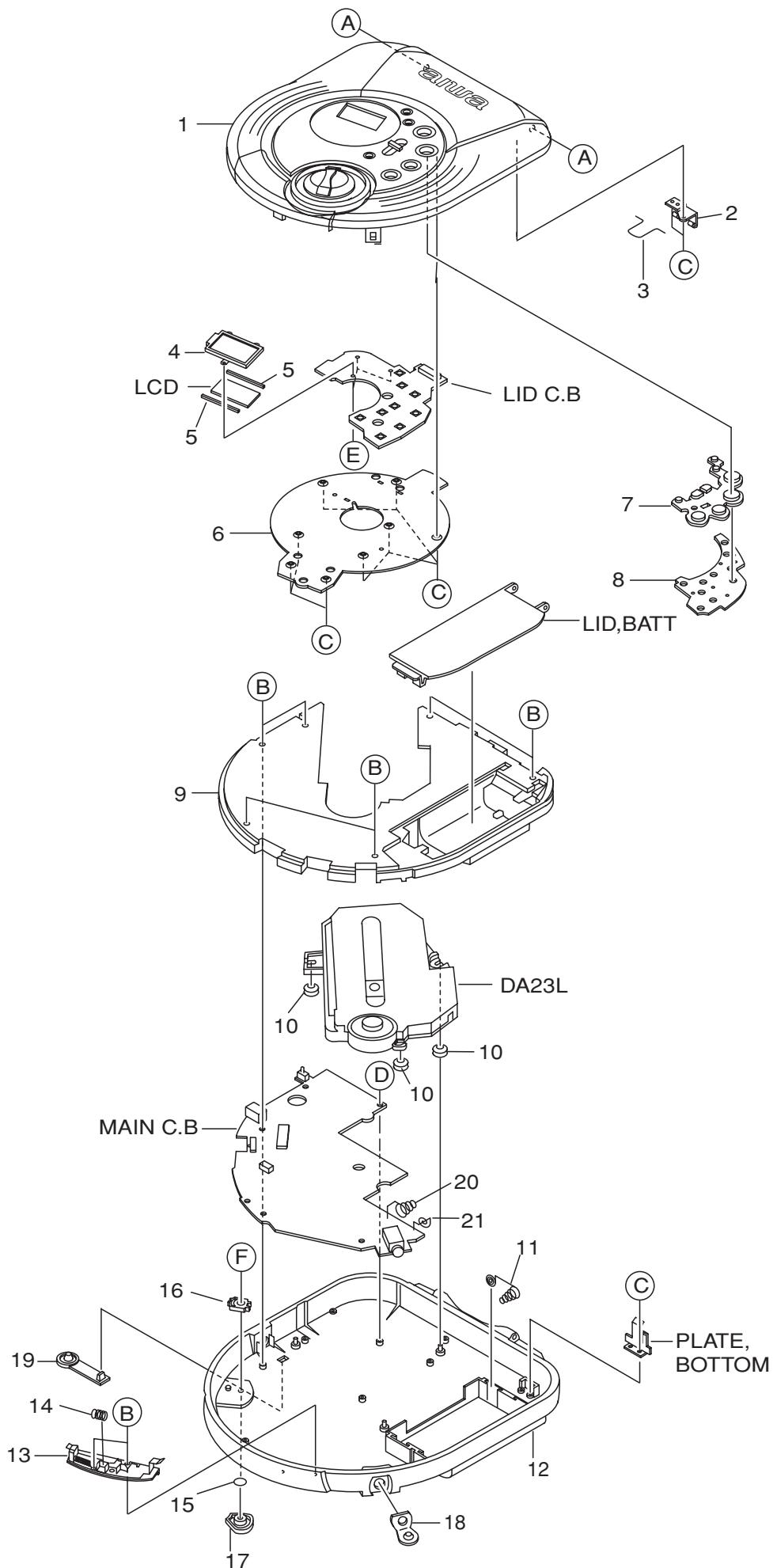
Pin No.	Pin Name	I/O	Description
49	AVSS1	—	Ground of analog circuits (audio output circuit)
50	OUTR	O	Rch audio output
51	AVDD1	—	Ground of analog circuits (audio output circuit)
52	FSEL	I	Noise filter on/off switching input. L: ON; H: OGG
53	TMOD1	I	Terminal mode switching input 1. Normal: L
54	TMOD2	I	Terminal mode switching input 2. Normal: L
55	FLAG	O	Flag signal output
56	CLVS/IPFLAG	O	Command switching. • Spindle servo phase sync signal output. H: CLV; L: Rough servo • Interpolation flag signal output. H: Interpolation
57	EXT0	I/O	Command switching • Expansion input/output port 0 • SRDATA input
58	EXT1	I/O	Command switching • Expansion input/output port 1 • LRCK input. H: Lch audio data; L: Rch audio data
59	EXT2	I/O	Command switching • Expansion input/output port 2 • BCLK input
60	TX	O	Digital audio interface output signal
61	MCLK	I	Microprocessor command clock signal input (latches data at the leading edge).
62	MDATA	I	Microprocessor command data signal input
63	MLD	I	Microprocessor command load signal input. L: Load
64	BLKCK	O	Subcode block clock signal: fBLKCK = 75 Hz (during normal playback) / CDTEXT SYNC signal (DQSY): fDQSY = 300 Hz (during normal playback)
65	SQCK/BCLK	I/O	Command switching • External clock input for Subcode Q register • Bit clock output for SRDATA
66	SUBQ/LRCK	O	Command switching • Subcode Q data output • L/R identification signal output. H: Lch audio data; L: Rch audio data
67	DMUTE/SRDATA	I/O	Command switching • Muting input. H: Muting • Serial data output
68	STAT	O	Status signals (CRC, RESY, CLVS, NTTSTOP, SQOK, FLAG6, SENSE, NFLOCK, NTLOCK, BSSEL, SUBQ data, CDTEXT data, anti-shock read-out data)
69	NRST	I	Reset input. L: Reset
70	SPPOL	O	Spindle motor drive signal output (polarity output)
71	PMCK	O	88.2 kHz clock signal output
72	SMCK	O	4.2336 MHz clock signal output
73	SUBC/SSYNC	O	Command switching • Subcode serial output • Sector sync output
74	SBCK/64FS	I	Command switching • Clock input for subcode serial output • 64FS output
75	NCLDCK	O	Subcode frame clock signal output (fCLDCK = 7.35 kHz)
76	NTEST	I	Test terminal. Normally, H.
77	X1	I	Crystal oscillator input. f = 16.9344 MHz
78	X2	O	Crystal oscillator output. f = 16.9344 MHz
79	DVDD1	—	Power supply of digital circuits
80	DVSS1	—	Ground of digital circuits

IC, MN101C439-AC

Pin No.	Pin Name	I/O	Description
1	COM3	O	LCD common
2	COM2	O	LCD common
3	COM1	O	LCD common
4	COM0	O	LCD common
5	VLC3	—	LCD power
6	VLC2	—	LCD power
7	VLC1	—	LCD power
8	VDD	—	LCD power
9	OSC2	O	Microcomputer main clock oscillation output.
10	OSC1	I	Microcomputer main clock oscillation input.
11	VSS	—	GND
12	XI	I	Sub clock oscillation.
13	XO	O	Sub clock oscillation.
14	MMOD	I	Connected VSS.
15	VREF-	—	VSS
16	AN0, PA0	I	Function key input.
17	AN1, PA1	I	PLAY/STOP Key input.
18	AN2, PA2	I	AC adapter detection.
19	AN3, PA3	I	Battery voltage detection.
20	AN4, PA4	I	Remote control input.
21	AN5, PA5	I	"DIGITAL OUT ON/OFF Input. ""L""=ON."
22	AN6, PA6	I	Select input of the EASS mode. Reference of A/D value table.
23	AN7, PA7	I	Resume/hold SW input.
24	VREF+	—	VCC
25	TXD, SB10, P00	I/O	Limit SW input.
26	RXD, SB10, P01	I/O	Power off output of the CD servo try bar. "L" = power off.
27	SBT0, P02	I/O	CD-RW regeneration gain up selection output. "H" = gain up.
28	SBO1, P03	I/O	CD-RW regeneration gain up select output. "L" = gain up."
29	SBI1, P04	I/O	Power down output of H/A.
30	SBT1, P05	I/O	Select output of the gain up with EASS. EASS ON = "L"
31	DK, BUZZER, P06	I/O	BUZZER output of the headphones.
32	RST, P27	I	Microcomputer reset input.
33	RMOUT, P10	I/O	Reset output of DSP.
34	P11	I/O	STAT input of DSP.
35	TM2IO, P12	I/O	MLD output of DSP.
36	TM3IO, P13	I/O	MDATA output of DSP.
37	TM4IO, P14	I/O	MCLK output of DSP.
38	IRQ0, P20	I	BLKCK input of DSP.
39	SENS, IRQ1, P21	I	Wireless remote control sensor signal input.
40	IRQ2, P22	I	Select input of AHC-4 or AHC-5. AHC-4 = "H". AHC-3 = "L".

Pin No.	Pin Name	I/O	Description
41	P23, IRQ3	I	Not used.
42	P40, KEY0	I/O	Power down output of H/A.
43	P41, KEY1	I/O	Select output of the gain up with EASS. EASS ON = "L".
44	P42, KEY2	I/O	DSL2 control output of the headphones. DSL2 = "H". DSL1/OFF = "L".
45	P43, KEY3	I/O	DSL on control output of the headphones. DSL ON = "H".
46	P44, KEY4	I/O	AUDIO MUTE outout.
47	P45, KEY5	I/O	Standby output of the headphones. STANDBY = "L"/POWER ON = "H".
48	P46, KEY6	I/O	Wireless LCD remote control output.
49	P47, KEY7	I/O	Power off output of power supply IC. "L" = POWER OFF.
50	P50, LED0, WE	I/O	Discharge output.
51	P51, LED1, RE	I/O	Charging output.
52	P52, LED2, CS	I/O	EEPROM CS output.
53	P53, SEG27, A16	I/O	EEPROM CLOCK output.
54	P54, SEG26, A17	I/O	EEPROM DATA output.
55	P60, SEG25, A0	I/O	Not used.
56	P61, SEG24, A1	I/O	Closing detection SW input of the cover.
57	P62, SEG23, A2	I/O	FL back light control output.
58	P63, SEG22, A3	I/O	PWM control output of the spindle.
59	P64, SEG21, A4	I/O	Output that is lighted button LED of the CAR-KIT model. "H" = Illumination.
60	P65, SEG20, A5	I/O	Axis loss mode ("H" = There is not an axis loss mode.)
61	P66, SEG19, A6	I/O	"L" = TEST MODE.
62	P67, SEG18, A7	I/O	Select input in 10 sec or 10/40 sec with AHC-5. "H" = 10 sec. "L"=10/40 sec.
63	P70, SEG17, A8	I/O	LCD segment output.
64	P71, SEG16, A9	I/O	LCD segment output.
65	P72, SEG15, A10	I/O	LCD segment output.
66	P73, SEG14, A11	I/O	LCD segment output.
67	P74, SEG13, A12	I/O	LCD segment output.
68	P75, SEG12, A13	I/O	LCD segment output.
69	P76, SEG11, A14	I/O	LCD segment output.
70	P77, SEG10, A15	I/O	LCD segment output.
71	P87, SEG9, D7	I/O	LCD segment output.
72	P86, SEG8, D6	I/O	LCD segment output.
73	P85, SEG7, D5	I/O	LCD segment output.
74	P84, SEG6, D4	I/O	LCD segment output.
75	P83, SEG5, D3	I/O	LCD segment output.
76	P82, SEG4, D2	I/O	LCD segment output.
77	P81, SEG3, D1	I/O	LCD segment output.
78	P80, SEG2, D0	I/O	LCD segment output.
79	SEG1	O	LCD segment output.
80	SEG0	O	Not used.

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL MAIN PARTS LIST 1/1

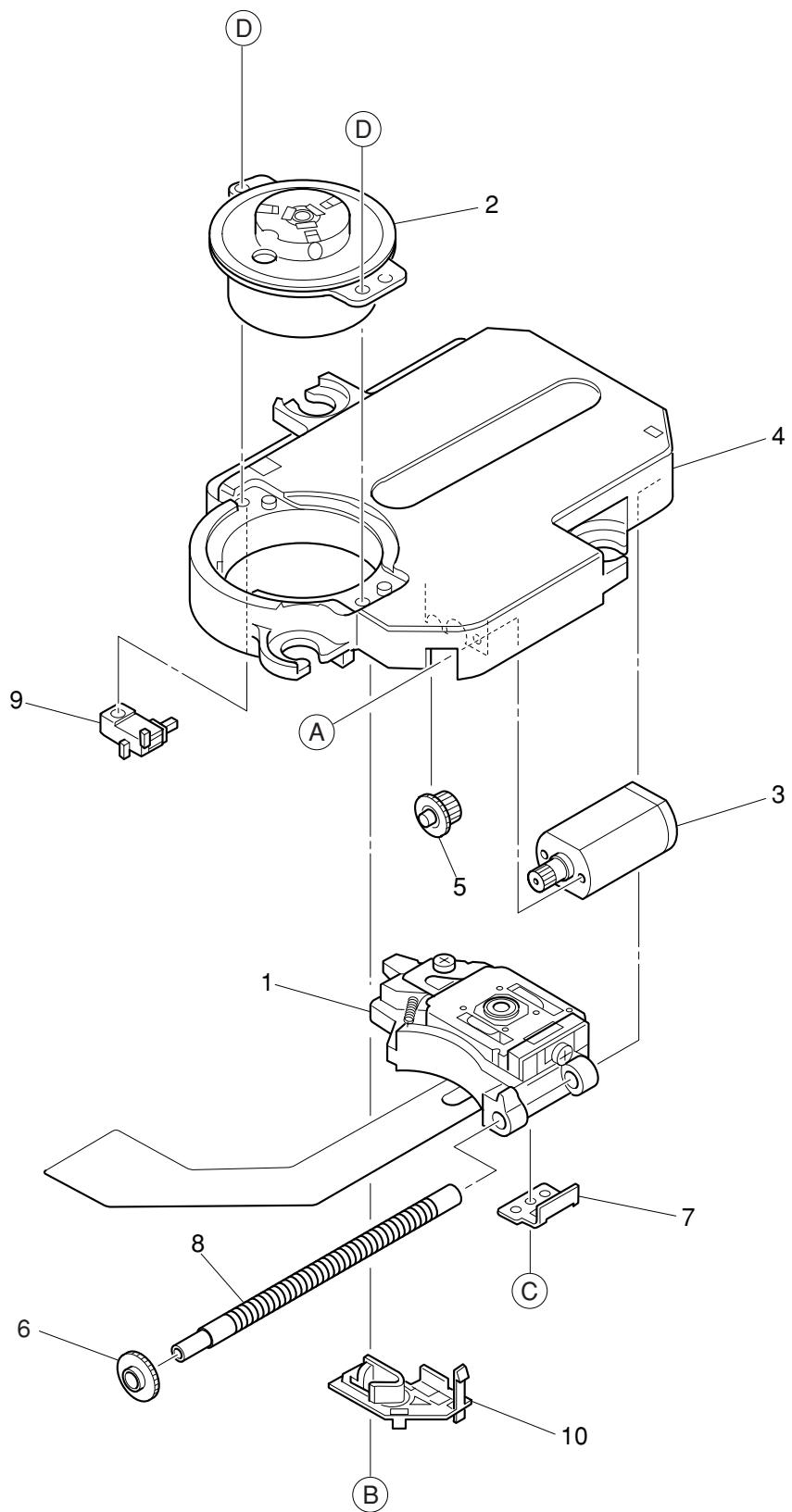
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-HC3-014-010		LID ASSY,CD<U2C2>
1	8A-HC3-018-010		LID ASSY,CD 911<1UB2,1U32>
2	8A-HC3-013-010		PLATE,LID CD B
3	8A-HC3-207-010		SPR,LID CD
4	8A-HC3-201-010		PLATE,LCD
5	8A-HC3-206-010		JOINT,LCD AHC-3
6	8A-HC3-012-010		PLATE,LID CD A
7	8A-HC3-011-010		BTN,CONT RBR
8	8A-HC3-202-010		HLDR,BTN
9	8A-HC3-015-010		CABI ASSY,CENTER
10	8Z-HC1-225-010		DMPR,MECHA(SP)
11	8Z-HC3-230-010		BAT-CONTACT,(+)(-)
12	8A-HC3-003-010		CABI,BOTTOM
13	8Z-HC3-216-010		HLDR ASSY,LOCK
14	8Z-HC3-213-010		SPR-E,LOCK
15	87-HC3-211-010		RING,KNOB RBR
16	8A-HC3-204-010		JOINT,RTRY HOLD
17	8A-HC3-010-010		KNOB,RTRY HOLD
18	8A-HC3-016-010		CAP, HP RBR
19	8A-HC3-017-010		CAP, DC RBR
20	8Z-HC7-204-010		BAT-CONTACT,(+)
21	8Z-HC7-205-010		BAT-CONTACT,(-)
A	86-HSB-226-010		S-SCREW,LID
B	87-067-869-010		V+1.7-8 HL BLK
C	87-067-732-010		TAPPING SCREW, VT1.4-3
D	88-HSA-227-010		S-SCREW,1.7-4 HL BLK
E	87-067-736-010		SCREW,1.4-2 BLK NLOCK
F	87-067-384-010		SCREWVT1.4-3.5HL

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

MECHANISM EXPLODED VIEW 1/1



MECHANISM MAIN PARTS LIST 1/1

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If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S0-A41-A20-600		PICKUP LASER ASSY
2	SM-10A-108-001		MOTOR ASSY SPINDLE
3	S0-M10-A10-900		MOTOR SLED ASSY
4	S2-311-A12-200		CHASSIS
5	S2-511-A23-200		GEAR MIDDLE
6	S2-511-A23-100		GEAR,SCREW
7	S2-511-A23-400		GEAR,RACK
8	S2-511-A07-900		SPINDLE SCREW
9	S4-S13-A00-200		SW,LEAF
10	S2-451-A18-100		HOLDER GEAR
A	SS-EXE-A04-000		SCR PAN PCS 1.4-2.2
B	SS-GXE-A00-300		SPECIAL SCREW
C	SS-EXE-A14-100		SPECIAL SCREW
D	SS-GXE-A00-202		SPECIAL SCREW M1.7-4.0

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